

REMARKS

Entry of the foregoing and further and favorable reconsideration of the subject application pursuant to and consistent with 37 C.F.R. §1.112 is respectfully requested.

By the present amendment, new claims 32 and 33 have been added. These claims, directed to methods and articles in which the nucleic acid and/or PNA fragments have all of the sequence of a full-length gene, are added in an effort to more precisely define the claimed invention. These claims derive support from throughout the specification and claims as originally filed. No new matter has been added.

Claim Rejections - 35 USC §103

Claims 1-8, 19-22, and 27-30 are rejected under 35 U.S.C. §103(a) as purportedly obvious over Gifford (U.S. Patent 5,750,335) in view of Chirikjian et al. (U.S. Patent 5,763,178) and Chee et al. (U.S. Patent 5,837,832). This rejection, to the extent that it applies to the claims as amended, is respectfully traversed.

The requirements of a *prima facie* case of obviousness are set forth in MPEP 2143:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Applicants maintain their previous arguments regarding the cited publications and their relationship to the claimed invention. In response to the Applicants' arguments, the Examiner asserts that "Chee et al. specifically teach that 'very long probes may be required for optimal detection.'" However, as noted previously by Applicants, Chee discloses a method that employs a mixture of contiguous short probes that represent a long sequence (e.g., "tiling method" (column 8, lines 17-29) which requires that a high number (~1296) of very short probes (preferably 10-18 bases) overlaps in order to cover the full length of an exon). However, Chee in no way teaches long probes.

The Examiner also argues that "the features upon which applicant relies (i.e., long probes) are not recited in the rejected claim(s). Applicants respectfully disagree. The probes referred to by Applicants are polynucleotides with the sequence of a full-length gene,

immobilized on chips. In an effort to clarify this point, new claims 32 and 33 have been added. Applicants submit that these claims clearly state that the probes used are full-length probes.

Withdrawal of this rejection is thus respectfully requested.

Claims 9-18 are rejected under 35 U.S.C. §103(a) as purportedly obvious over Chirikjian et al., in view of Chee et al., and further in view of Goldrick et al. (U.S. Patent 5,891,629). This rejection, to the extent that it applies to the claims as amended, is respectfully traversed.

The deficiencies of Chirikjian et al. and Chee et al. have been discussed above, and previously by Applicants; those earlier remarks are incorporated herein by reference. The Examiner argues that "the amended claims addressed in the previous rejection recited 'part of a full-length sequence.'" However, Applicants note that the "part of" limitation was removed from the claims in their last response. Accordingly, claims 9-18 are not *prima facie* obvious over Chirikjian et al., neither in view of Chee et al., nor further in view of Goldrick et al. Withdrawal of this rejection is thus respectfully requested.

Claims 28-30 are rejected under 35 U.S.C. §103(a) as purportedly obvious over Chee et al. (U.S. Patent 5,837,832) in view of Chirikjian et al. (U.S. Patent 5,763,178). This rejection, to the extent that it applies to the claims as amended, is respectfully traversed.

The deficiencies of Chirikjian et al. and Chee et al. are discussed above. Neither patent discloses, or suggests, the use of all of a full-length sequence as a probe, as required by the present claims. Accordingly, claims 28-30 are not *prima facie* obvious over Chee et al. in view of Chirikjian et al. Withdrawal of this rejection is thus respectfully requested.

Claims 23-25 are rejected under 35 U.S.C. §103(a) as purportedly obvious over Gifford (U.S. Patent 5,750,335) in view of Zoltukhin et al. (U.S. patent 5,874,304) and Fleck et al. (*Nucl. Acids Res.* 22:5289-5295, 1994). This rejection, to the extent that it applies to the claims as amended, is respectfully traversed.

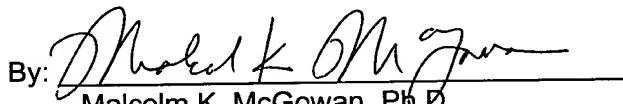
The deficiencies of Gifford are discussed above. The Gifford patent does not disclose, or suggest, the use of all of a full-length sequence as a probe, as required by the present claims. Neither the alleged teaching of GFP as a label by Zoltukhin et al., nor the alleged teaching of the Mut S homolog of *S. pombe*, remedies this deficiency. Accordingly, claims 23-25 are not *prima facie* obvious over Gifford in view of Zoltukhin et al. and Fleck et al. Withdrawal of this rejection is thus respectfully requested.

From the foregoing, further and favorable reconsideration in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited.

In the event that there are any questions concerning this amendment, or the application in general, the Examiner is respectfully urged to telephone the undersigned so that prosecution of this application may be expedited.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: 
Malcolm K. McGowan, Ph.D.
Registration No. 39,300

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

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